AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently amended) An intelligent light emitting diode (LED) module for a traffic signal; comprising:

~~a voltage source, said voltage source continuously supplying a voltage to the said traffic signal;~~

an electronic switch that continuously receives a voltage from an associated voltage source and conveys the voltage to at least one other component on the LED module;

~~an integrated~~ a flasher operatively coupled to the electronic switch to toggle a state of the electronic switch at a predetermined rate;

a power supply ~~for powering the at least one light element~~ that receives power distributed by the electronic switch;

at least one ~~light element~~ LED that is powered by the power supply; and

a dimming interface ~~for dimming the at least one light element~~ operatively coupled to the power supply for dimming the at least one LED ~~light element~~;

~~a controller for generating an appropriate~~ at least one ~~command signal based on one or more status signals;~~

said module generates at least one status signal ~~said status signals comprise one or more of the following: light element current, light element voltage, light output, input current and input voltage~~ indicative of one or more of the following: a ~~light element~~ current traveling through the at least one LED; a ~~light element~~ voltage applied across the at least one LED; a light ~~output~~ energy emitted from the at least one LED; an input current generated by the associated voltage source, and an input voltage generated by the associated voltage source, and conveys the at least one status signal to an associated controller that generates a command in response, the command is based on the at least one status signal and controls the at least one LED of the LED module, ~~and~~ said command ~~signals comprise~~ including one or more of the following: an on or off command, a dimming command, a flashing command, and an emergency disconnection command ~~signal~~.

~~a light sensor for detecting light output of the at least one light element;~~

~~a voltage detecting circuit for detecting the light element voltage, and the output voltage or combinations thereof; and~~

~~a current monitoring circuit for measuring the light element current, the output current, or combinations thereof.~~

2. (Currently amended) The module of claim 1, further including a light sensor mounted adjacent to the at least one LED, wherein the light sensor is a photocell that senses the light energy emitted from the at least one LED and in response produces and conveys a signal indicative of the light energy to the associated controller.

3. (Currently amended) The module of claim [[1]] 2, wherein the ~~at least one light element is an LED array~~ signal is compared against a threshold to determine whether the LED is approaching a predefined end of life.

4. (Currently amended) The module of claim 1, wherein the controller validates that the power supply of the module ~~light array~~ is functioning using ~~the LED voltage, the LED current and the light output status~~ at least one of the current traveling through the at least one LED; the voltage applied across the at least one LED; and the light energy emitted from the at least one LED.

5. (Currently amended) The module of claim 1, wherein the controller validates ~~the power supply~~ a status of the associated voltage source using the input current generated by the associated voltage source and the output current generated by the associated voltage source.

6. (Currently amended) The module of claim 1, wherein the electronic switch is an ~~on/off~~ opto-triac switch.

7. (Currently amended) ~~The module of claim 6 wherein the on/off switch is an opto-triac switch.~~ further comprising an input power source fuse that is tripped when the at least one LED does not respond to the off command.

8. (Currently amended) The module of claim [[1]] 7, wherein the fuse is tripped by shorting the supply line of the voltage source ~~further comprising an emergency disconnect~~.

9. (Currently amended) The module of claim [[8]] 1, wherein the emergency disconnect command ~~is open to~~ opens a circuit supplying power to the at least one LED by blowing a fuse associated with the supply voltage which removes voltage from the at least one LED.

10. (Currently amended) The module of claim 1, wherein the ~~integrated~~ flasher includes ~~comprises~~ a timer circuit.

11. (Currently amended) The module of claim 10, wherein the timer circuit switches the electronic switch on and off at a predetermined flashing rate.

12. (Currently amended) The module of claim 11, wherein the ~~integrated~~ flasher is disabled ~~enabled when~~ by the flashing command ~~generated by the controller~~.

13. (Currently amended) The module of claim [[11]] 1, wherein the flasher ~~timer circuit~~ is bypassed when the flashing command is received ~~signal is not generated~~.

14. (Currently amended) The module of claim 1, wherein the dimming interface decodes the dimming command and adjusts a power converter feedback loop of the module in response to the dimming command.

15. (Currently amended) The module of claim [[14]] 1, wherein the dimming command is selected from ~~the~~ a group consisting of the following: on/off, linear and pulse width modulation.

16. (Currently amended) ~~An intelligent light emitting diode module for a~~ A traffic signal; comprising:

a voltage source that ~~, said voltage source~~ continuously supplies ~~supplying~~ a voltage to at least one component of said traffic signal;

an intelligent traffic signal LED module that is powered by the voltage source, said intelligent traffic signal LED module including:

an electronic switch that continuously receives a voltage from the voltage source and ~~turns the power supply on or off in response to the on/off command~~; conveys the voltage to at least one other component of the LED module;

an ~~integrated~~ flasher operatively coupled to the electronic switch, said ~~integrated~~ flasher ~~is enabled in response to the flashing command~~ toggles the electronic switch on and off at a predetermined rate;

a power supply that powers ~~for powering the at least one LED array~~ at least one component of the LED module upon receiving the voltage from the electronic switch;

at least one LED array that is powered by the power supply, said at least one LED array, including:

a voltage detecting circuit for measuring ~~the~~ an LED array ~~light element~~ voltage across the LED array; ~~and~~

a current monitoring circuit for measuring ~~the~~ an LED array ~~light element~~ current flowing through the LED array; and

a light sensor mounted ~~in the traffic signal adjacent~~ proximate to the at least one LED array for detecting light output of the at least one LED array; and,

a dimming interface operatively coupled to the power supply for dimming the at least one LED array, said dimming interface capable of adjusting a power converter feedback loop associated with the power supply for controlling the voltage provided to the at least one LED array ~~in response to the dimming command~~; and

a controller for generating ~~an appropriate~~ a command signal for controlling the LED array based on one or more status signals, said status signals including ~~comprise~~ one or more of the following: the LED array ~~light element~~ current flowing through the LED array, the LED ~~light element~~ voltage across the LED array, the LED light output of the LED array, an input current to the traffic signal LED module and input voltage to the traffic signal LED module, and said command including ~~signals comprise~~ one or more of the following: an on/off command, a dimming command, a flashing command, and an emergency disconnection command ~~signal~~.

17-20. (Cancelled)

21. (New) A traffic signal having a traffic signal LED module for controlling at least one LED of the traffic signal; comprising:

a voltage source that supplies a voltage to said traffic signal;

an intelligent traffic signal LED module that is powered by the voltage source, said intelligent traffic signal LED module including at least one LED; and

a controller that generates at least one command that controls the LED module based on one or more status signals, said command including one or more of the following: an on/off command, a dimming command, a flashing command, and an emergency disconnection command, and said status signals including one or more of the following: a current flowing through the LED, a voltage across the LED, a light output of the LED, an input current to the LED module, and input voltage to the LED module.

22. (New) The traffic signal of claim 21, the intelligent traffic signal LED including:

an electronic switch that continuously receives a voltage from the voltage source and conveys the voltage to at least one other component on the LED module;

a flasher operatively coupled to the electronic switch, said flasher toggles the electronic switch on and off at a predetermined rate;

a power supply that powers the at least one LED upon receiving the conveyed voltage from the electronic switch; and

a dimming interface operatively coupled to the power supply and the at least one LED for dimming the at least one LED, said dimming interface capable of adjusting a power converter feedback loop associated with the power supply for controlling the voltage provided to the at least one.

23. (New) The traffic signal of claim 22, the intelligent traffic signal LED module further including:

a voltage detecting circuit for measuring the current flowing through the LED;

a current monitoring circuit for measuring the voltage across the LED; and

a light sensor mounted next the at least one LED for detecting light output of the LED.

24. (New) The traffic signal of claim 20, wherein the voltage source continuously supplies the voltage to the traffic signal.